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EXAMINER

ANGEBRANNDT, MARTIN J

ART UNIT PAPER NUMBER

1756

DATE MAILED: 08/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/960,625

Applicant(s)

BERNETH ET AL.

Examiner

Martin J Angebrannt

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 2/7/02 & 5/2/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 1756

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4, at line 28, "of the phthalocyanine" should read - - of the phenyl ring of the phthalocyanine- - .

In claim 4 at line 24, "alkinyl" should read - - alkynyl- - .

In claim 4, at line 35, please delete "reasonable".

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1756

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5 and 8-11 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Umehara et al. '979.

Umehara et al. '979 in example 4 teach a phthalocyanine compound, which is spin coated, provided with a reflective layer and a UV cured protective layer.

The examiner holds that the recording layer is inherently able to be recorded upon using at least one wavelength in the range of 360-460 nm. The examiner holds that the data recorded in the medium using the laser of the example cited can be formed using a laser operating in the 360-460 nm wavelength and the these spots would undistinguishable. The examiner notes that claims 10-11 are to the recorded article and that while using the shorter wavelength allows smaller spot sizes to be formed at the same NA, the claims are not limited to bit recorded at any particular NA or necessarily below the size able to be recorded at longer wavelengths.

7. Claims 1-5 and 8-11 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Kimura et al. '962.

Kimura et al. '962 in example 1 teach an optical recording medium using phthalocyanine compounds (o) or (p), which are spin coated. Example 3 uses a phthalocyanine compound (Q), which is spin coated, provided with a reflective layer and a UV cured protective layer.

The examiner holds that the recording layer is inherently able to be recorded upon using at least one wavelength in the range of 360-460 nm. The examiner holds that the data recorded in the medium using the laser of the example cited can be formed using a laser operating in the

Art Unit: 1756

360-460 nm wavelength and the these spots would undistinguishable. The examiner notes that claims 10-11 are to the recorded article and that while using the shorter wavelength allows smaller spot sizes to be formed at the same NA, the claims are not limited to bit recorded at any particular NA or necessarily below the size able to be recorded at longer wavelengths.

8. Claims 1-6 and 8-11 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Takasu et al. JP 59-177743.

Example 1 uses an Al chloride coordinated phthalocyanine (CAS RN 14154-42-8) which is vapor deposited and coated with a reflective layer. (page 3/lower right hand column).

9. Claims 1-6 and 8-11 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Kondo et al. JP 01-030038.

The example uses an Al chloride coordinated phthalocyanine (CAS RN 14154-42-8) which is coated on a substrate and with a reflective layer. (page 2/lower right hand column).

10. Claims 1-6 and 8-11 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Aoyangi et al. JP 01-050253.

Example 1 uses an Al chloride coordinated phthalocyanine (CAS RN 14154-42-8) which is spin coated with a PVA binder. (page 4/upper right hand column).

11. Claims 1-6 and 8-11 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Bloom et al. GB 2066489.

Example 2 uses an chloroaluminum phthalocyanine (CAS RN 14154-42-8) which is vapor deposited on a gold reflective layer.

12. Claims 1-5 and 7-11 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Miyamoto et al. JP 11-138993 (machine translation attached).

Art Unit: 1756

Example 2 uses a chlorosilicon phthalocyanine (CAS RN 13930-88-6) which is vapor deposited, provided with a silver reflective layer and a protective layer. Section [0075] describes examples 2-6 and indicates that example 2 uses (SiCl<sub>2</sub>-Pc). Figures 2 discloses the absorption for the phthalocyanine compound in the 240-430 nm range as well as the 600-800 nm range. [0058]. The use of other coating methods including spin coating is disclosed [0038-0042,0045-0047]. The addition of binders and the like is disclosed. [0043-0044].

13. Claims 1-5 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto et al. JP 11-138993.

It would have been obvious to one skilled in the art to use spin coating to allow the addition of a binders, rather than vapor deposition used in example 2 with a reasonable expectation of success based upon the disclosure of equivalence and the desirability of adding a binder.

14. Claims 1-5 and 7-11 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Tatsuzono et al. JP 04-185485.

Example 20 in the table on page 4 uses a chlorosilicon phthalocyanine (CAS RN 13930-88-6) which is vapor deposited.

15. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over **either of** Miyamoto et al. JP 11-138993, Tatsuzono et al. JP 04-185485, Bloom et al. GB 2066489, Aoyangi et al. JP 01-050253, Kondo et al. JP 01-030038 or Takasu et al. JP 59-177743, further in view of JP 64-011892.

JP 64-011892 teaches the use of alkoxy or aryloxy substituents directly in the central metal of phthalocyanines.

Art Unit: 1756

It would have been obvious to one skilled in the art to modify the inventions of **either of** Miyamoto et al. JP 11-138993, Tatsuzono et al. JP 04-185485, Bloom et al. GB 2066489, Aoyangi et al. JP 01-050253, Kondo et al. JP 01-030038 **or** Takasu et al. JP 59-177743 by using other ligands, such as the alkoxy and aryloxy ligands taught by JP 64-011892 in place of the halogen ligands with a reasonable expectation of gaining the increased sensitivity and absorption properties.

16. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over **either of** Miyamoto et al. JP 11-138993, Tatsuzono et al. JP 04-185485, Bloom et al. GB 2066489, Aoyangi et al. JP 01-050253, Kondo et al. JP 01-030038, Umehara et al. '979, Kimura et al. '962 **or** Takasu et al. JP 59-177743, further in view of Iwamura et al. '437 and Whalley, M., "Cojugated Macrocycles. Part XXXII.\* Absorption Spectra of tetraazoporphyrins and phthalocyanines. Formation of pyridine salts.", J. Chem. Soc., pt 1. (1961) pp. 866-869.

Iwamura et al. '437 teach that porphyrin compounds have a strong absorption between 400 and 500 nm in the Soret band. The use of this absorption band for high density recording is disclosed. (3/43-4/38)

Whalley, M., "Cojugated Macrocycles. Part XXXII.\* Absorption Spectra of tetraazoporphyrins and phthalocyanines. Formation of pyridine salts", J. Chem. Soc., pt 1. (1961) pp. 866-869 teaches the presence of strong absorptions in the 350 nm region. (page 867)

If it is found that the data marks formed using wavelengths in the 350-460 nm range inherently differ from those formed at longer wavelengths, the examiner further holds that it would have been obvious to modify the inventions of **either of** Miyamoto et al. JP 11-138993, Tatsuzono et al. JP 04-185485, Bloom et al. GB 2066489, Aoyangi et al. JP 01-050253, Kondo

Art Unit: 1756

et al. JP 01-030038, Umehara et al. '979, Kimura et al. '962 or Takasu et al. JP 59-177743 by using shorter wavelengths, such as 400-460 nm, to increase the density of the data able to be recorded based upon the disclosure of the absorptions in the ca 350 nm range by Whalley, M., "Cojugated Marcocycles. Part XXXII.\* Absorption Spectra of tetraazoporphyrins and phthalocyanines. Formation of pyridine salts", J. Chem. Soc., pt 1. (1961) pp. 866-869 and the disclosure that the shorter wavelength bands of porphyrin type compounds are known to be useful in shorter wavelength optical recording as taught by Iwamura et al. '437 and result in higher density recording.

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sasa et al. JP 2000-228028 teaches the use of the 300-500 nm absorption of the Soret (S-band) of naphthalocyanines in optical recording. The use of compounds having two strong absorptions reduces the wavelength dependency of the medium.

Nagao et al. JP 11-334207 teaches the use of blue lasers with porphyrin compounds. The wavelength range is between 350 and 530 nm and uses the Soret band. [claim 2] and [0014].

Matsuzawa et al. JP 07-304256 teaches the use of blue lasers with porphyrin compounds. The wavelength range is between 400 and 500 nm. [claim 4] and [0020].

Moser et al., "Phthalocyanine Compounds", ACS Monograph series, (1963) pp. 28-35 teaches the presence of strong absorptions in the 350 nm region and the presence of the Soret band. (page 34) See also figure 2.7.




Art Unit: 1756

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J Angebrannt whose telephone number is 703-308-4397.

The examiner can normally be reached on Mondays-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 703-308-2464. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Martin J Angebrannt  
Primary Examiner  
Art Unit 1756

July 29, 2003